

# Environmental Protection Division



## **Safe Dams Program: Overview & Discussion of Potential Program and Rule Changes Stakeholder Meeting February 2015**

A photograph showing a large industrial facility, identified as the Southwire Plant, completely inundated by floodwater. The water is a muddy, brown color and appears to be in motion. In the background, several large industrial buildings with metal roofs are visible. In the foreground, there are some yellow safety barriers and a large black structure, possibly a piece of machinery or a storage tank, partially submerged. The sky is overcast and grey.

**Richard Lake Dam  
Southwire Plant  
Carrollton, GA**

**Georgia Department of Natural Resources**

# Meeting Outline



- Welcome & Introductions (Jac Capp)
- Importance of Safe Dams (Tom Woosley)
- Overview of the Safe Dams Act & Basic Regulatory Activities (Tom Woosley)
- Current Workload Status (Tom Woosley)
- Sustainability Plan
  - Program Changes Already Made (Jac Capp)
  - Program Changes Being Considered (Jac Capp)
  - Rule Changes Being Considered (Jac Capp)
  - Compliance (Lewis Hays)
- Wrap Up (Jac Capp)

# Georgia Safe Dams Act



1977	39 lives and millions in property lost when Kelly Barnes Lake Dam broke; Stephens County, GA
1978	Safe Dams Act : To provide for the inspection and permitting of certain dams in order to protect the health, safety and welfare of the citizens of the state by reducing the risk of failure of such dams.
1984	Amended: Changed spillway size criteria and shifted classification from GSWCC to EPD
1990	Amended: Added criteria for local governments to inform EPD and provide information for proposed development below dams



# Safe Dams



- **Importance of Safe Dams**
  - **Public Safety & Protection of the Environment**
  - **Reminders of Recent Dam Failures**



# Lake Larry Dam – Tift County



- **Sudden failure in 2012**
- **On “To Be Studied” list**
- **6 inches of water in house downstream**

# Mission Sandy Springs Lake Dam – Fulton County



- **June 2013**
- **Downstream wall collapsed**
- **100 people evacuated**
- **No lives lost**
- **Exempt structure**



# Lake Alice Dam – Forsyth County



- **May 2013 failure**
- **Heavy rains**
- **Category II**
- **No lives lost, major environmental impact**

# Laura Lake Dam – Cobb County



- **Sept. 2009 storm**
- **Dam overtopped**
- **Reclassified to Category I after event**



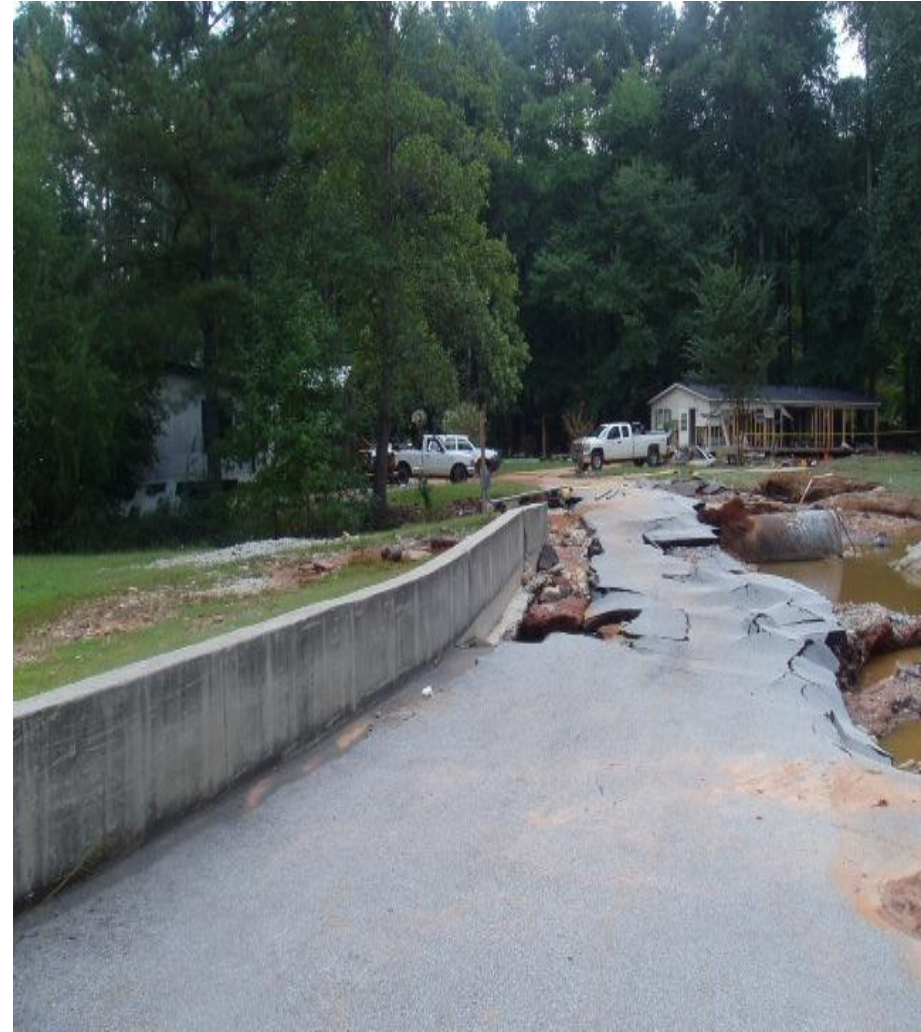
# Pumpkinvine Watershed #3



- **Sept. 2009 storm**
- **Emergency spillway erosion**
- **Near failure**



# Pine Lake Dam – Douglas County





# Pine Lake Dam – Douglas County



- **Sept. 2009 storm**
- **Emergency spillway activated**
- **Mother & son in mobile home, rescued**



# Willow Springs Lake Dam – Paulding County





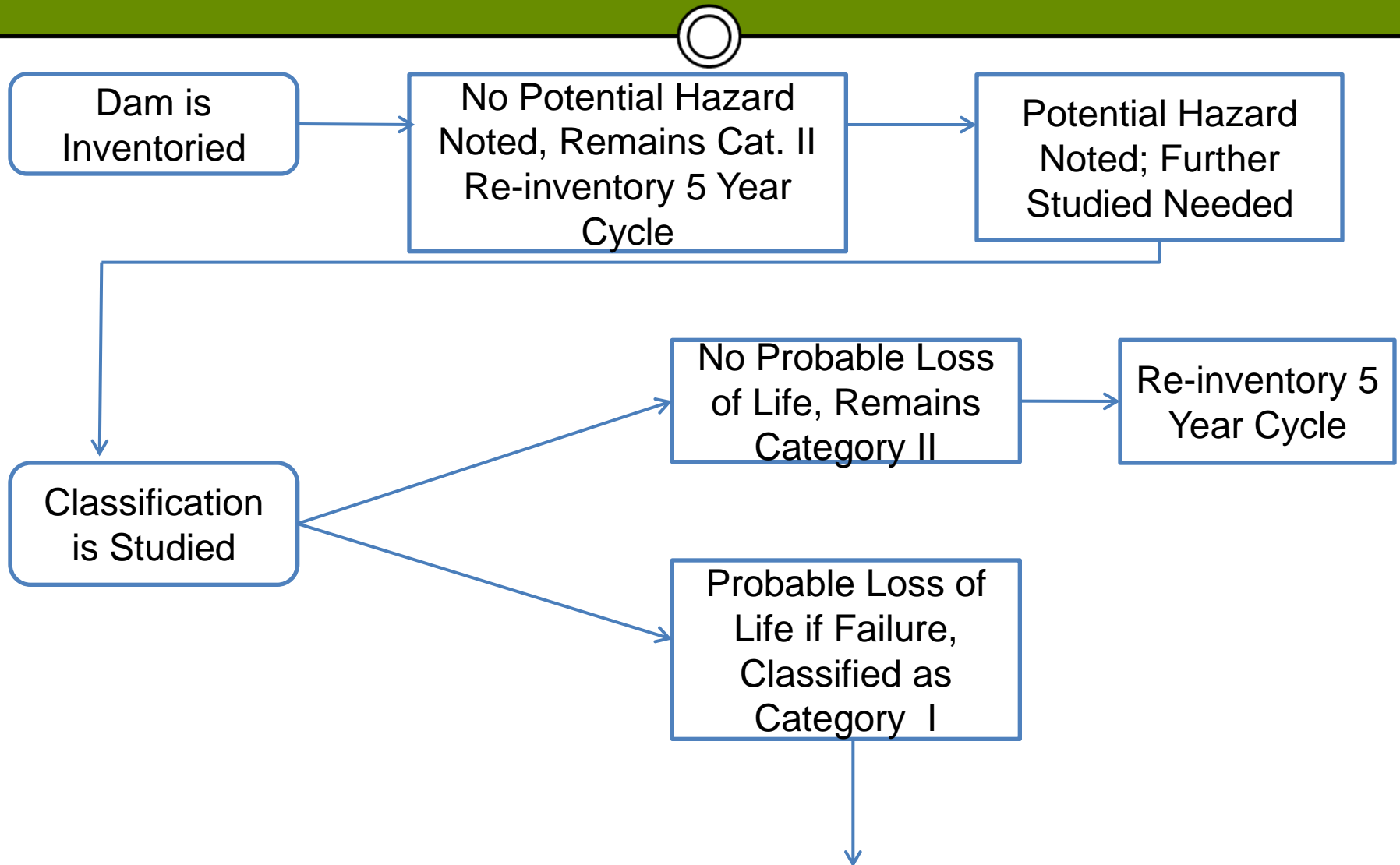
# Willow Springs Lake Dam – Paulding County



- **April 2014 failure**
- **Category II – “To Be Studied”**
- **12 to 15 ft. floodwave**
- **4 ft. flooding at house**

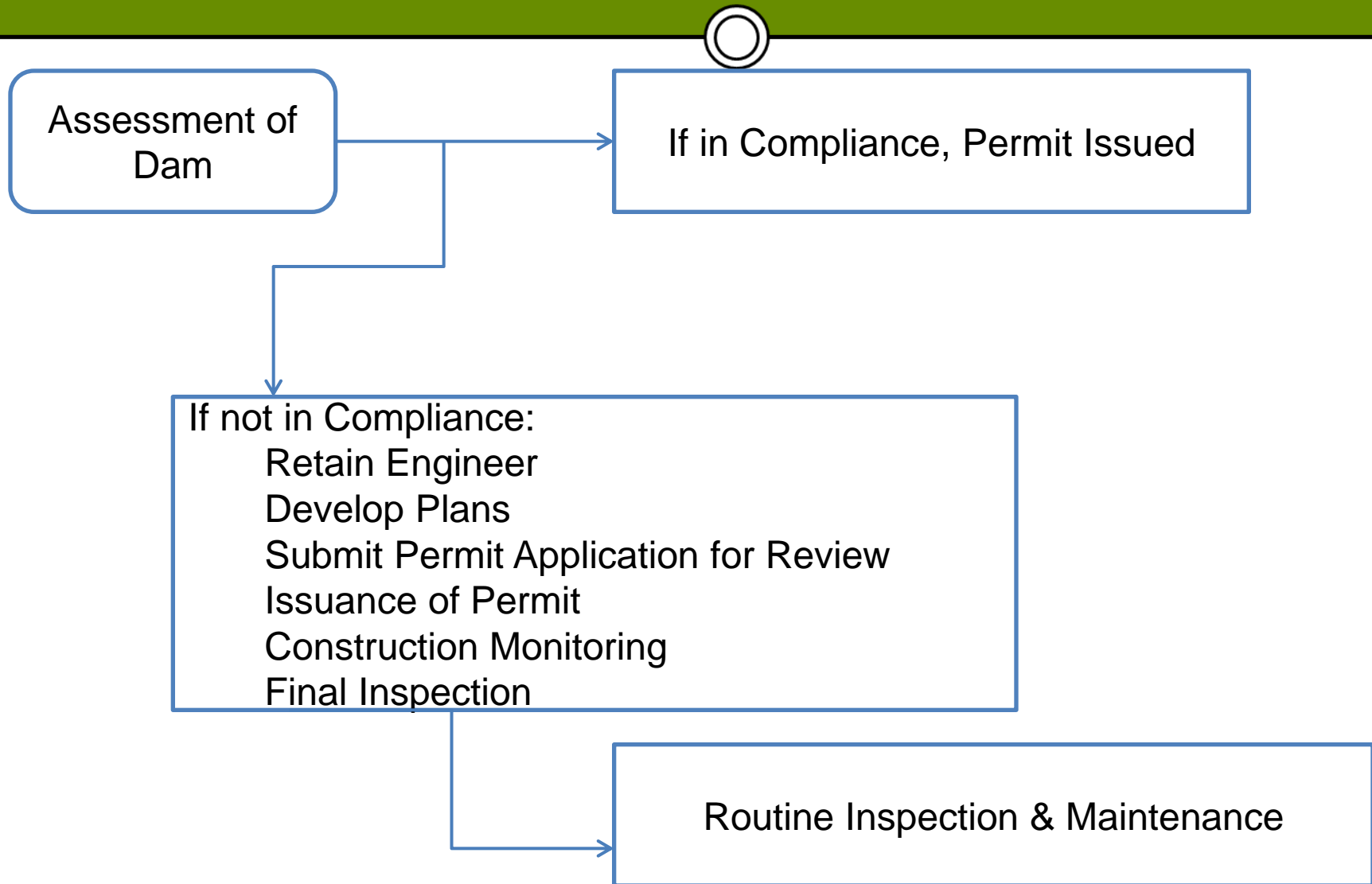


# Safe Dams – Work Process

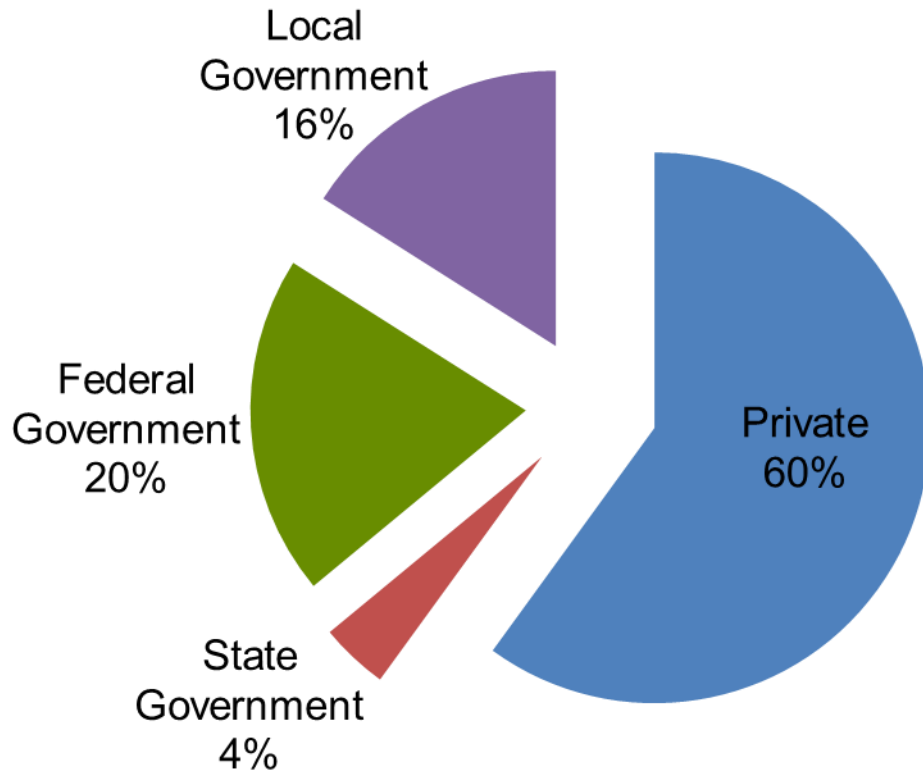




# Safe Dams – Work Process



# Safe Dams: Ownership



- Dam owners are solely responsible for the safety and liability of their dam and for financing its upkeep, upgrade and repairs.
- EPD serves as the State's regulatory agent, thus does not own any dams.

State Ownership: GSWCC, DOC, DNR Parks, GDOT

# Safe Dams: Regulatory Activities



*Mission Sandy Springs Lake Dam*

- Classification
- Inventory/Re-inventory
- Permitting & Plan Reviews
- Enforcement
- Inspections
- Emergency Response



# Safe Dams: Classification



## What is a Dam?

- Height of at least 25 feet, **OR**
- Storage of at least 100 acre-feet

*Exemptions: Federal dams, storage less than 15 acre-feet, or height of less than 6 feet*

**Purposes:** Drinking Water, Recreation, Flood Control, Irrigation, Power Generation and Waste Containment

## Category I

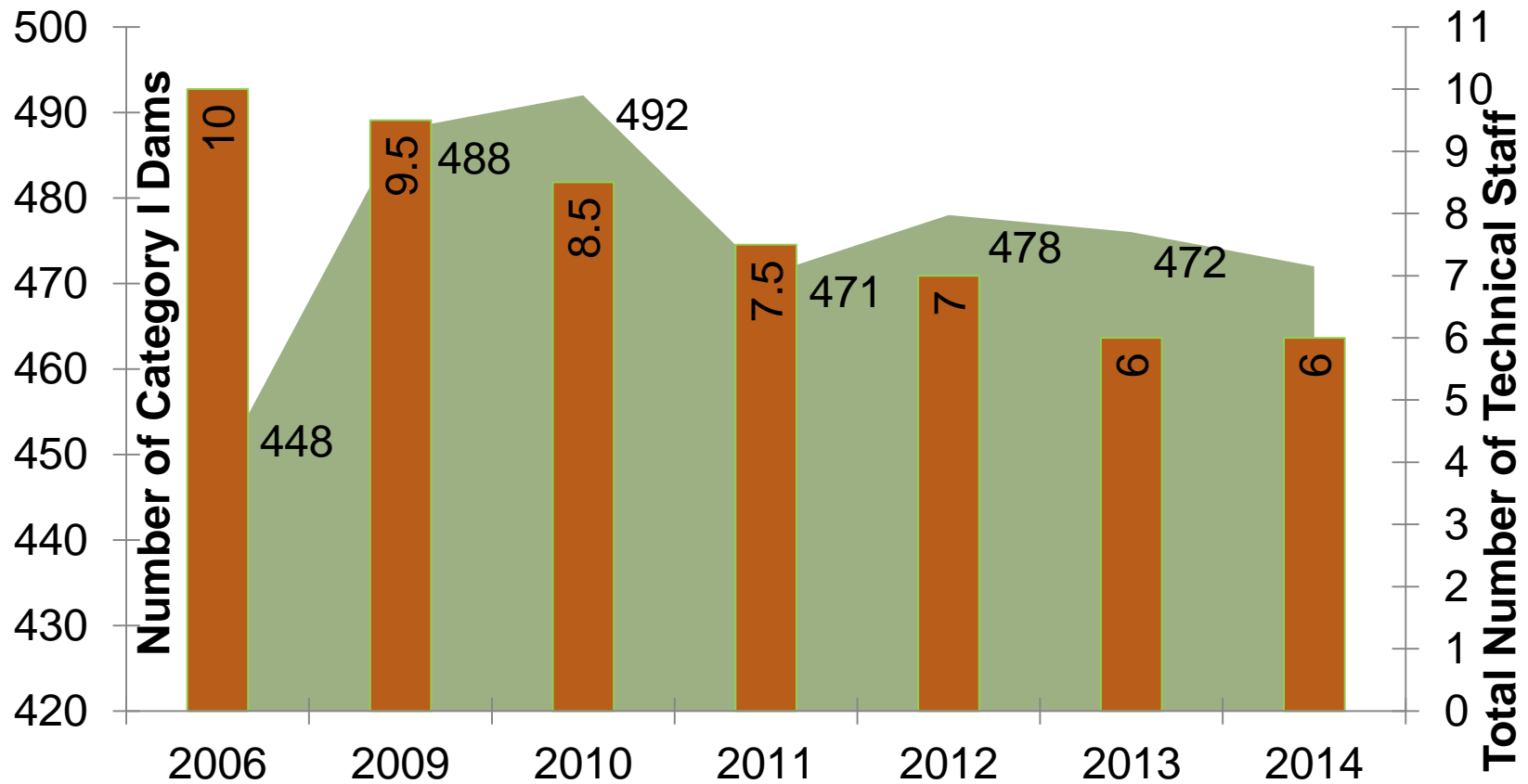
- Meets definition of a dam
- Probable loss of life if dam were to fail

## Category II

- Meets definition of a dam
- **NO** probable loss of life if dam were to fail



# Safe Dams: Classification Workload



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# Safe Dams: Inventory/Re-Inventory



- EPD maintains the State's dam inventory
- CAT II are inventoried every five years
- Review downstream area for development



Which dams need further study?

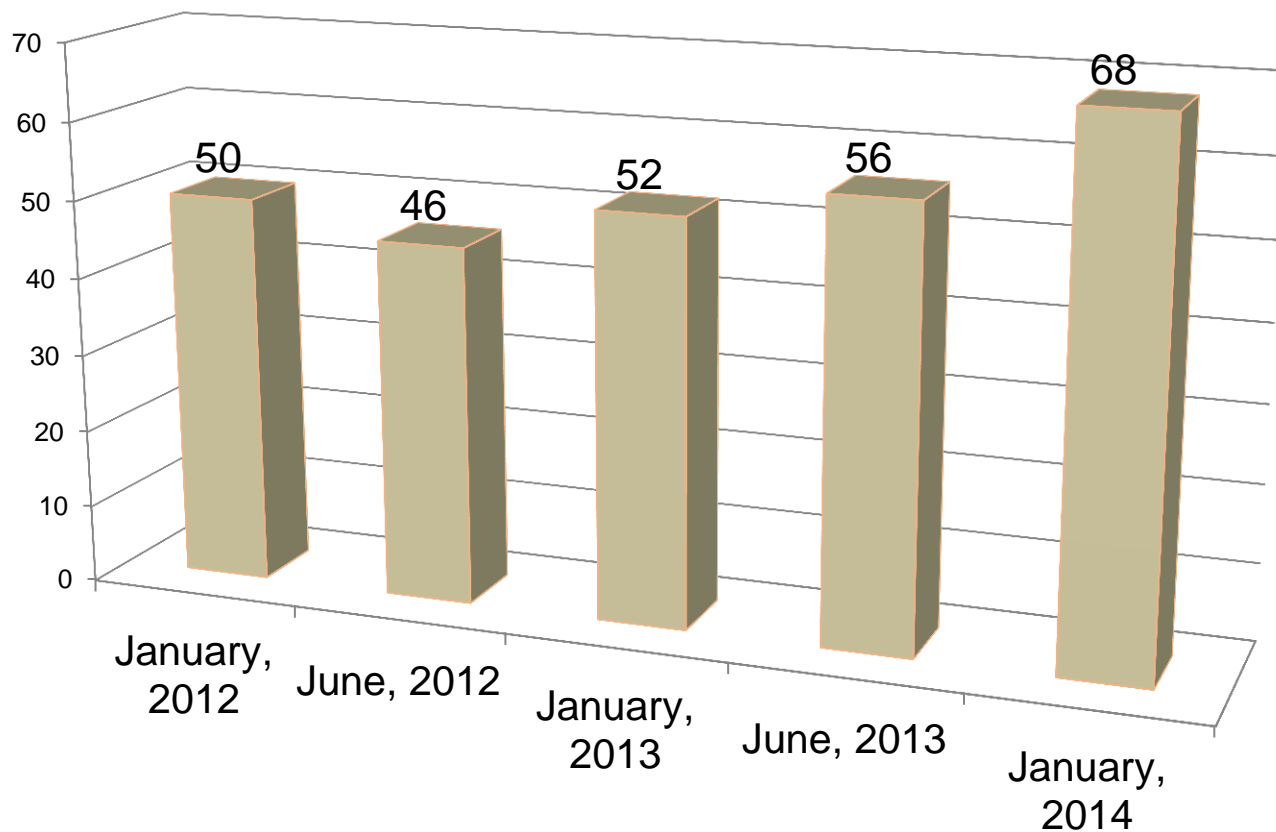
- CAT II and proposed dams
- When classifier identifies potential hazard
- Visual observation or dam break model used to evaluate
- ~ 60% become CAT I



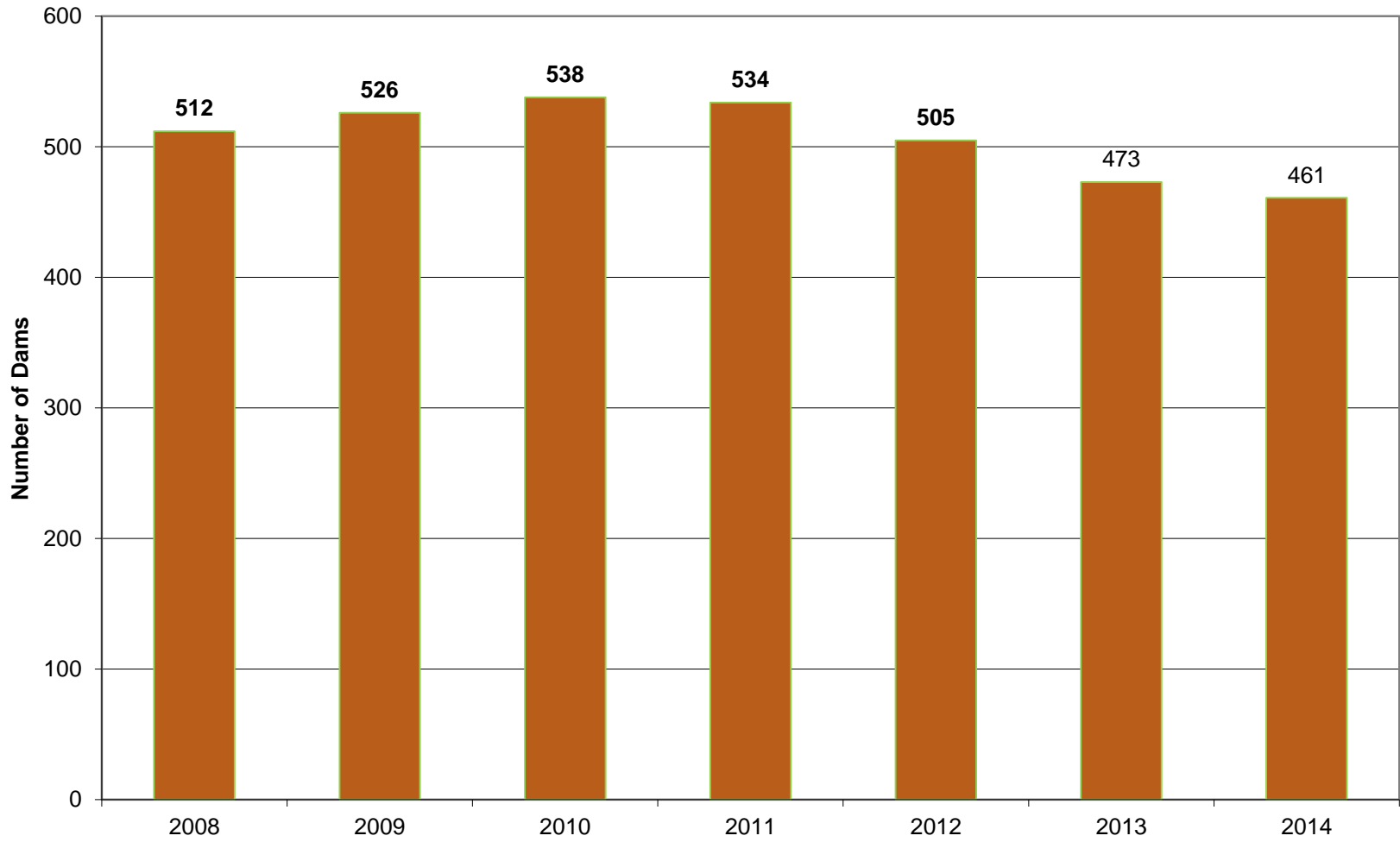
# Safe Dams: County Re-Inventory



## Counties Outside 5 Year Window



# Safe Dams: To Be Studied List



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# Safe Dams: Visual Inspection Report



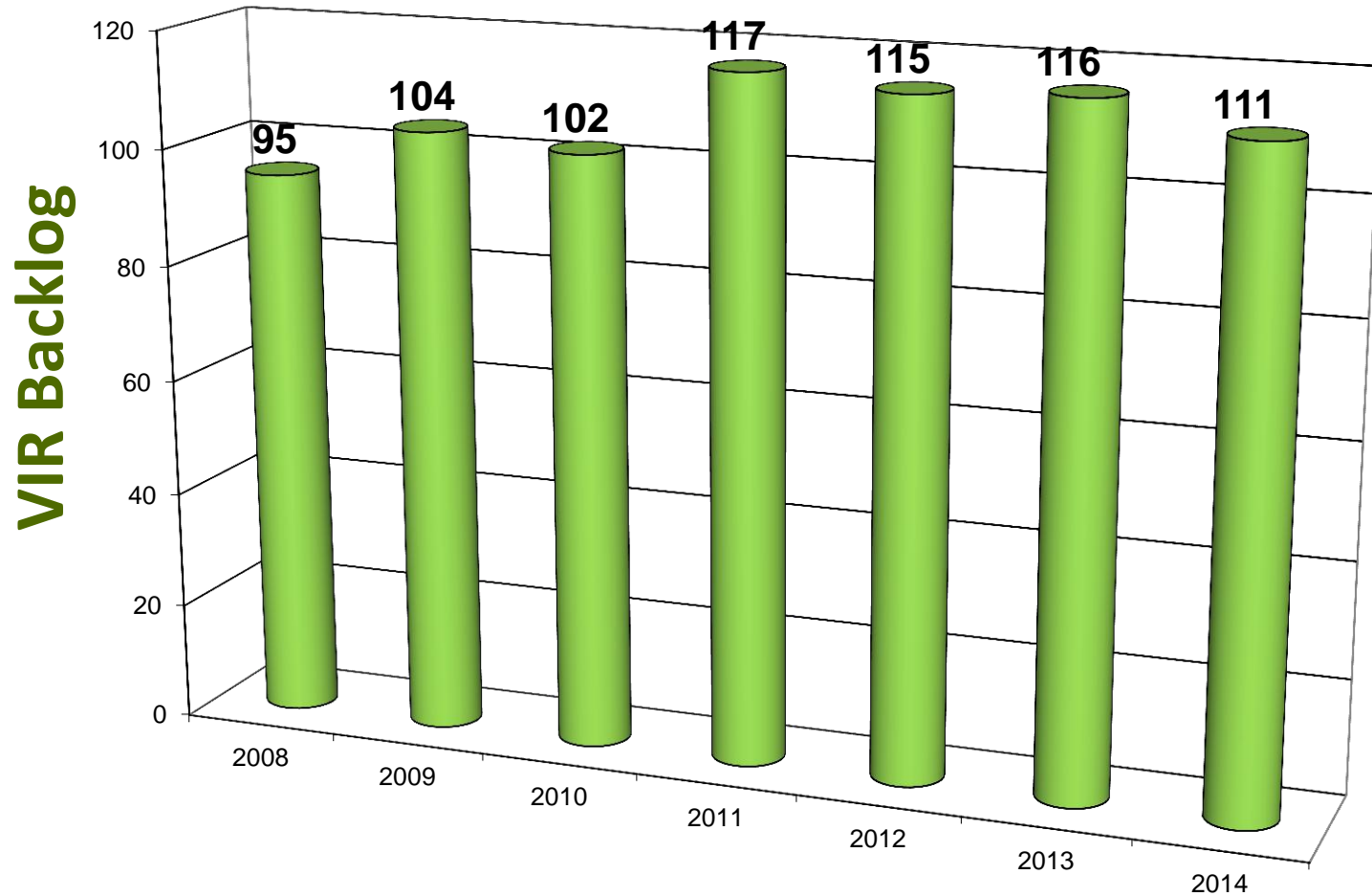
- Prepared when Category II Dam becomes a Category I
- Condition Assessment of Dam



- Outlines Deficiencies with Dam so Owner Can Retain Engineer
- First Step in Bringing Dam into Compliance
- Dams as old as 1978 with an average 10 plus years on List (80 of these are GSWCC watershed dams)



# Safe Dams: Visual Inspection Report



# Safe Dams: Permitting



## **478 Category I Dams**

- 37% State-Owned
  - GSWCC easement holder on watershed dams
  - State Parks – 9 of 34 dams are Category I
- 18% Local Government
- 45% Private Owned



# Safe Dams: Plan Reviews



- For All New Category I Dams
- Any Category I Dams Rehabilitation
- Any Proposed Drinking Water Reservoirs





# Safe Dams: Category I Inspections



- 1978-2010:
  - EPD Annual Inspections
  - Construction Monitoring & Other
- 2010-2013:
  - Bi-Annual by EPD staff
  - Quarterly by Owners
  - Construction Monitoring & Other



# Safe Dams: Emergency Response



- Serve as Technical Expert on Dams
- Provide on-site CAT I Inspection in Emergency
- Coordinate with Local EMA and GEMA
- Assist with and Retain Emergency Action Plans (EAPs)



# Sustainability Plan



- The Safe Dams Act states: “It is the role of this program to provide for the inspection and permitting of certain dams in order to protect the health, safety, and welfare of all the citizens of the state of Georgia by reducing the risk of failure of such dams.”
- Goal of Sustainability Plan: To operate the Safe Dams Program as efficiently as possible given resource realities to provide the protection envisioned by the Safe Dams Act
  - Goals:
    - Meet 5-yr time frame in Act to re-inventory the Category II dams
    - Move dams from the “To Be Studied” list to either Category I or Category II status as appropriate
    - Move unpermitted Category I dams to become permitted
    - Plans to improve dams are reviewed timely
    - Permit applications are reviewed timely
    - Ensure Category I dams have Emergency Action Plans
    - Ensure Category I dams are periodically inspected
    - Timely, consistent, and fair enforcement of the Act



# Sustainability Plan



- Program Changes Already Made:
  - EPD is prioritizing and expediting plans for dam improvements
  - EPD expectations for application review timeliness
    - Comply with the timeframes in O.C.G.A. §12-2-2(c)(1)(A), which generally requires review within 90 days of complete application
  - EPD expectations for complete applications
    - All necessary information, including all plans and engineering reports, visual inspection reports (VIR), Operation and Maintenance Plans, and Emergency Action Plans (EAP), as appropriate, in accordance with O.C.G.A §12-5-376
  - Applicants of incomplete applications will be promptly notified
  - EPD expectations for review of dam plans without a permit application
    - 1 month

# Sustainability Plan



- Program Changes Already Made:
  - Letters sent to ACCG, GMA, and the Board of Commissioners on April 1, 2014 to remind them of the requirement for local governments to notify the dam owner of any proposed structure that would result in changing a Category II dam to a Category I dam before a building permit is issued.
  - Failure to provide such notification may be subject to enforcement action
  - Copy of letter provided

# Sustainability Plan



- Program Changes Being Considered
  - Letters to be sent to all dam owners that have been reclassified to Category I, but have not yet submitted the application in accordance with § 12-5-376
    - The letter will state that the application is due within 180 days of the date of the letter and the VIR (if not already submitted) is to be submitted by the dam owner as part of a complete application in accordance with 391-3-8-.08(3)(d)(ii)1. and 7.
    - EPD will no longer conduct the VIR except in special cases
    - EPD is willing to work with dam owners to establish reasonable compliance schedules
      - Dam owners that fail to submit an application and are non-responsive to the EPD notification may be subject to enforcement
    - Copy of draft letter provided



# Sustainability Plan



- Rule Changes Being Considered:
  - Dambreak Modeling
    - Amend rules to require Dam owners to conduct a dambreak analysis and submit results to EPD within 90 days of notification from EPD that the dam may be reclassified from Category II to Category I.
  - Inspections
    - Amend rules to require that dam owners retain a professional engineer to inspect their dams on an annual basis and report the findings of that inspection to EPD.
  - Emergency Action Plans (EAP)
    - Amend rules to require EAPs as part of the application for a safe dams permit.
    - Existing permittees would have ~18 months to develop and submit their EAP.
  - Miscellaneous clean ups
  - Copy of Draft Rule Changes Provided

# Sustainability Plan

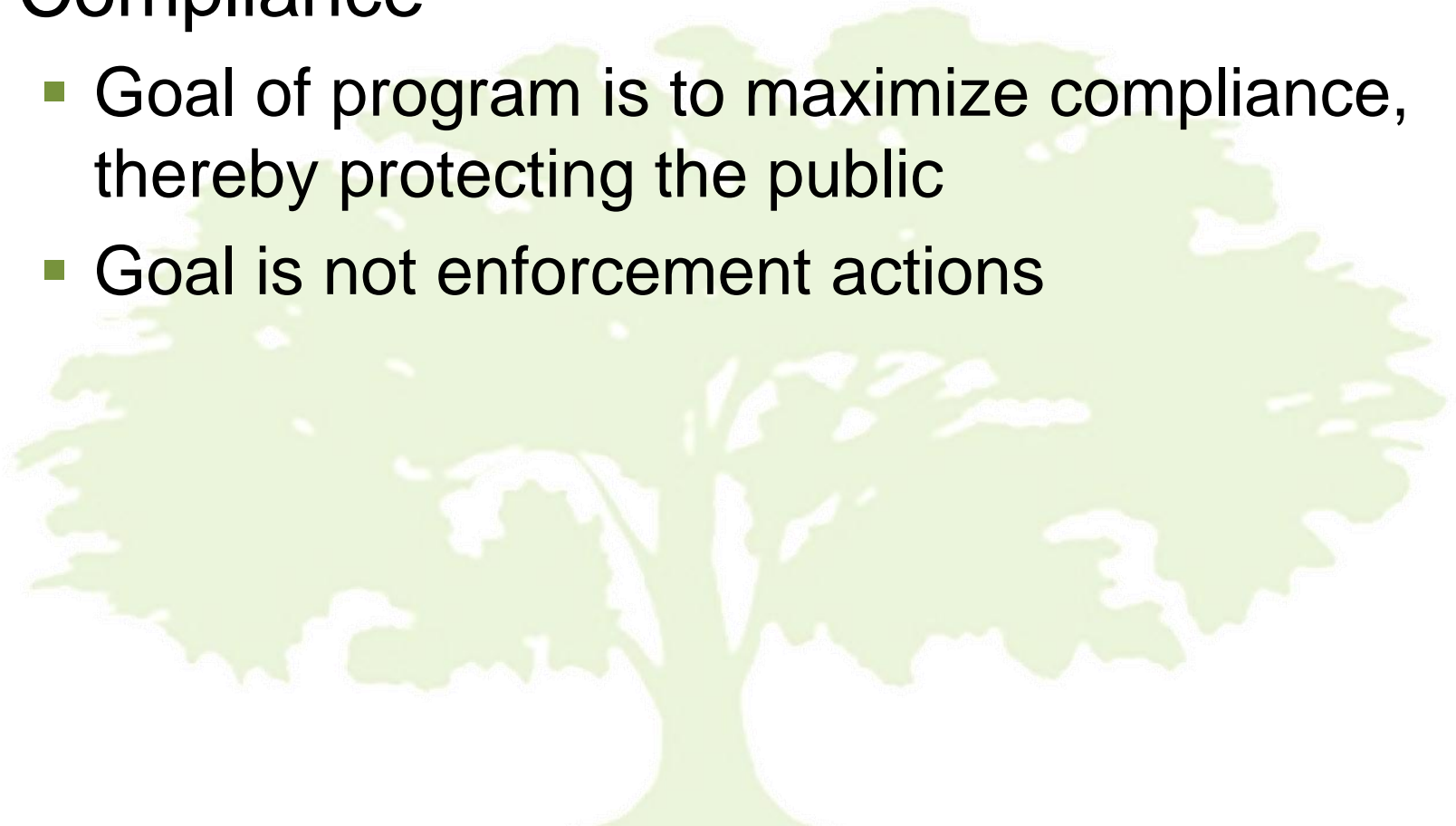


- Rule Changes Being Considered – Path Forward
  - EPD is not formally proposing any rule changes at this time.
  - There is no set schedule for making any changes at this time.
  - Proposed Rule(s) late spring 2015 is a possibility.
  - Any proposed rule changes in the future would involve public notice, public hearing, and opportunity to comment.

# Sustainability Plan



- Compliance
  - Goal of program is to maximize compliance, thereby protecting the public
  - Goal is not enforcement actions





# Wrap Up



- Specific areas where comment is requested
  - Unpermitted Cat I Dam Owners to submit application within 180 days of receipt of notification letter from EPD
  - Rule Changes Being Considered
    - “To Be Studied” List Dam Owners to conduct a dambreak analysis when required by EPD
    - Cat I Dam Owners responsible for annual inspections
      - Schedule
    - All Cat I Dams have Emergency Action Plans
  - Anything else

# Wrap Up



- Thank you for your interest, attendance, and participation
- Please provide any comments by March 20, 2015
  - Mail: James A. Capp  
Chief, Watershed Protection Branch, EPD  
2 Martin Luther King Jr. Drive, Suite 1152 East  
Atlanta, GA 30334  
RE: Safe Dams Program Stakeholder Meeting
  - E-mail: [tim.cash@dnr.state.ga.us](mailto:tim.cash@dnr.state.ga.us); Subject: Safe Dams Program Stakeholder Meeting
- To ensure that you are notified of any future EPD Watershed Branch stakeholder meetings and/or public hearings on this subject, please email Tim Cash: [tim.cash@dnr.state.ga.us](mailto:tim.cash@dnr.state.ga.us)

# END

